Vivaspin® Turbo 15

Allows fastest sample concentration with highest recoveries

Centrifugal Concentration

Disposable Ultrafiltration device for sample concentration

- Complete Recoveries
- Fastest Concentrations
- Highest Chemical Resistance

Introduction
Vivaspin® Turbo 15 centrifugal concentrators offer the optimal solution to any concentration or buffer exchange application with their broad range of MWCOs.

Highest flow rates are achieved due to their twin vertical membranes which minimize protein polarization and subsequent fouling of the membrane. Additionally, their sleek internal profile ensures maximum process speeds right down to the last 100 µl.

Working Principle
Centrifugation provides the vector to clear solvent and micro molecules through an ultrafiltration membrane to separate macromolecular species and solvents primarily on the basis of size. It is particularly appropriate for the concentration of macromolecules and can also be used to purify molecular species or for solvent exchange. Ultrafiltration is a non denaturing method that is more efficient, flexible and gentle than alternative processes.

High Performance
In a single spin, 15 ml solutions can be concentrated up to 150x. Samples can be typically concentrated in 10–30 minutes with macromolecular recoveries in excess of 95%.

Optimized Design for Fastest Concentration Results
The Vivaspin® Turbo's optimized design, its sleek internal profile, ensures maximum process speeds right the way down to the last few micro liters. The UV joining technology allows for a smooth joint transition between membrane and plastic housing, allowing all of your valuable sample to be collected into the unique pipette friendly dead stop pocket.

The ultimate in centrifugal ultrafiltration technology:

– **Sleek internal design:**
Ensures maximum process speed for the complete filtration

– **Large twin vertical membranes:**
A fouling of the membrane is avoided due to minimized protein polarization.

– **Unique angular dead stop pocket:**
The 100 µl dead stop pocket is easy to access with standard 200 µl pipette tips due to its patent pending angular design. It eliminates the risk of the sample running to dryness while allowing highest recovery of the concentrate.

Optimized Choice of Materials for High Chemical Compatibility
The combination of Polyethersulfone (PES), Polystyrene and Polypropylene (PP) allows sterilization and depyrogenization of the Vivaspin® Turbo 15 units.

Polyethersulfone membranes are preferred for their low fouling characteristics, exceptional flux and broad pH range compatibility.

Applications
Sample preparation
- Sample (protein, lipid, virus, nanoparticle, macromolecule) concentration
- Desalting | Dialysis
- Rebuffering

Your sample is often the result of several months of research. Your sample is valuable, and Vivaspin® Turbo 15 provides highest recovery.

Summary
For scientists and lab technicians who need to quickly and safely concentrate biological samples of 4 ml to 15 ml up to 150 fold, Sartorius offers the Vivaspin® Turbo 15 ultrafilters.

Unlike competitive ultrafiltration units, Vivaspin® Turbo 15 is equipped with an angular dead stop pocket, that enables reproducible and complete recoveries, while being the fastest in the market.

Technical specifications

Materials	Body	Styrene butadiene copolymere
	Filtrate vessel	Polypropylene
	Concentrator cap	Polypropylene
	Membrane	Polyethersulfone (PES)
Dimensions	Total length (concentrator insert)	77 mm
	Total length (in tube with cap)	118 mm
	Diameter (concentrator insert)	27 mm
	Active membrane area	7.2 cm^2
	Hold up volume of membrane	<10 µl
	Dead stop volume in swing out	100 µl
	Dead stop volume in fixed angle	60 µl
Concentrator capacity	Swing bucket rotor	15 ml
	Fixed angle rotor (25°)	9 ml
Maximum speed 3 kDa – 50 kDa	4000 × g	4000 × g
Maximum speed 100 kDa	3000 × g	3000 × g
Sterilization	ETO or 70% EtOH	
Removal of endotoxins [Depyrogenization]	Flushing with 1N NaOH	

Performance Characteristics

Time to concentrate up to 20x [min.] at 20 °C and solute recovery %

Rotor	Swing bucket		Fixed angle (25°)	
Centrifugal speed	4,000 g		4,000 g	
Start volume	15 ml		9 ml	
	Min.	Rec.	Min.	Rec.
Cytochrome c* (12,400 MW) 3 MWCO PES	61	98%	86	97%
Lysozyme* (14,300 MW) 3 MWCO PES	56	98%	87	97%
Cytochrome c* (12,400 MW) 5 MWCO PES	30	98%	50	98%
Lysozyme* (14,300 MW) 5 MWCO PES	33	96%	50	96%
α-Chymotrypsin** (25,000 MW) 10 MWCO PES	10	95%	10	95%
BSA** (66,000 MW)				
10 MWCO PES	10	99%	10	99%
30 MWCO PES	8	98%	10	98%
IgG** (160,000 MW)				
30 MWCO PES	23	95%	17	95%
50 MWCO PES	20	94%	15	94%
100 MWCO PES***	30	92%	16	92%

* 0.25 mg/ml
** 1 mg/ml
*** 3,000 × g centrifugal speed

Order Information
Vivaspin® Turbo 15 centrifugal concentrator, disposable ultrafiltration unit, for sample volumes 4–15 ml, Polyethersulfone UF membrane.

Cut off	Quantity	Order no.
3,000 MWCO	12	VS15T91
3,000 MWCO	48	VS15T92
5,000 MWCO	12	VS15T11
5,000 MWCO	48	VS15T12
10,000 MWCO	12	VS15T01
10,000 MWCO	48	VS15T02
30,000 MWCO	12	VS15T21
30,000 MWCO	48	VS15T22
50,000 MWCO	12	VS15T31
50,000 MWCO	48	VS15T32
100,000 MWCO	12	VS15T41
100,000 MWCO	48	VS15T42

WolfLabs

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

www.wolflabs.co.uk

Tel : 01759 301142

Fax : 01759 301143

sales@wolflabs.co.uk

Please contact us if this literature doesn't answer all your questions.